

PATENT COOPERATION TREATY

PCT

NOTIFICATION OF ELECTION

(PCT Rule 61.2)

From the INTERNATIONAL BUREAU

To:

Commissioner
 US Department of Commerce
 United States Patent and Trademark
 Office, PCT
 2011 South Clark Place Room
 CP2/5C24
 Arlington, VA 22202
 ETATS-UNIS D'AMERIQUE
 in its capacity as elected Office

Date of mailing (day/month/year) 11 December 2000 (11.12.00)		
International application No. PCT/SE00/00574	Applicant's or agent's file reference 2008619	
International filing date (day/month/year) 23 March 2000 (23.03.00)	Priority date (day/month/year) 23 March 1999 (23.03.99)	
Applicant BOSTRÖM, Anders et al		

1. The designated Office is hereby notified of its election made:

☒ in the demand filed with the International Preliminary Examining Authority on:

17 October 2000 (17.10.00)

☐ in a notice effecting later election filed with the International Bureau on:2. The election ☒ was☐ was not

made before the expiration of 19 months from the priority date or, where Rule 32 applies, within the time limit under Rule 32.2(b).

The International Bureau of WIPO 34, chemin des Colombettes 1211 Geneva 20, Switzerland Facsimile No.: (41-22) 740.14.35	Authorized officer F. Baechler Telephone No.: (41-22) 338.83.38
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PATENT COOPERATION TREATY

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INTERNATIONAL PRELIMINARY EXAMINATION REPORT

(PCT Article 36 and Rule 70)

REC'D 12 JUL 2001

WIPO PCT

14

Applicant's or agent's file reference PC-20008619	FOR FURTHER ACTION See Notification of Transmittal of International Preliminary Examination Report (Form PCT/IPEA/416)	
International application No. PCT/SE00/00574	International filing date (day/month/year) 23.03.2000	Priority date (day/month/year) 23.03.1999
International Patent Classification (IPC) or national classification and IPC7 H 04 L 12/52, H 04 Q 11/04		
Applicant Net Insight AB et al		

1. This international preliminary examination report has been prepared by this International Preliminary Examining Authority and is transmitted to the applicant according to Article 36.
2. This REPORT consists of a total of 3 sheets, including this cover sheet.

☐ This report is also accompanied by ANNEXES, i.e., sheets of the description, claims and/or drawings which have been amended and are the basis for this report and/or sheets containing rectifications made before this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions under the PCT).

These annexes consist of a total of _____ sheets.

3. This report contains indications relating to the following items:

- I ☒ Basis of the report
- II ☐ Priority
- III ☐ Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
- IV ☐ Lack of unity of invention
- V ☒ Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
- VI ☐ Certain documents cited
- VII ☐ Certain defects in the international application
- VIII ☐ Certain observations on the international application

Date of submission of the demand 17.10.2000	Date of completion of this report 02.07.2001
Name and mailing address of the IPEA/SE Patent- och registreringsverket Telex Box 5055 17978 S-102 42 STOCKHOLM PATOREG-S Facsimile No. 08-667 72 88	Authorized officer Rickard Elg/MN Telephone No. 08-782 25 00

INTERNATIONAL PRELIMINARY EXAMINATION REPORT

International application No.

PCT/SE00/00574

I. Basis of the report

1. With regard to the elements of the international application:*

☒ the international application as originally filed

☐ the description: _____, as originally filed
 pages _____, filed with the demand
 pages _____, filed with the letter of _____

☐ the claims: _____, as originally filed
 pages _____, as amended (together with any statement) under article 19
 pages _____, filed with the demand
 pages _____, filed with the letter of _____

☐ the drawings: _____, as originally filed
 pages _____, filed with the demand
 pages _____, filed with the letter of _____

☐ the sequence listing part of the description: _____, as originally filed
 pages _____, filed with the demand
 pages _____, filed with the letter of _____

2. With regard to the **language**, all the elements marked above were available or furnished to this Authority in the language in which the international application was filed, unless otherwise indicated under this item.
 These elements were available or furnished to this Authority in the following language English which is:

☐ the language of a translation furnished for the purposes of international search (under Rule 23.1(b)).

☒ the language of publication of the international application (under Rule 48.3(b)).

☐ the language of the translation furnished for the purposes of international preliminary examination (under Rules 55.2 and/or 55.3).

3. With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application, the international preliminary examination was carried out on the basis of the sequence listing:

☐ contained in the international application in written form.

☐ filed together with the international application in computer readable form.

☐ furnished subsequently to this Authority in written form.

☐ furnished subsequently to this Authority in computer readable form.

☐ The statement that the subsequently furnished written sequence listing does not go beyond the disclosure in the international application as filed has been furnished.

☐ The statement that the information recorded in computer readable form is identical to the written sequence listing has been furnished.

4. ☐ The amendments have resulted in the cancellation of:

☐ the description, pages _____

☐ the claims, Nos. _____

☐ the drawings, sheet/fig _____

5. ☐ This report has been established as if (some of) the amendments had not been made, since they have been considered to go beyond the disclosure as filed, as indicated in the Supplemental Box (Rule 70.2 (c)).**

* Replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are annexed to this report since they do not contain amendments (Rules 70.16 and 70.17).

** Any replacement sheet containing such amendments must be referred to under item I and annexed to this report.

INTERNATIONAL PRELIMINARY EXAMINATION REPORT

International application No.

PCT/SE00/00574

V. Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. Statement

Novelty (N)	Claims	<u>1-13</u>	YES
	Claims	_____	NO
Inventive step (IS)	Claims	<u>1-13</u>	YES
	Claims	_____	NO
Industrial applicability (IA)	Claims	<u>1-13</u>	YES
	Claims	_____	NO

2. Citations and explanations (Rule 70.7)

The following documents have been cited in the International Search Report:

D1: US, 5,027,349, A

D2: WO, 97/20405, A

D3: Barath T. et al "A Simple Data Link protocol for High-Speed Packet Networks", Bell Labs Technical Journal, January 1999, pp. 85-104

D4: Bohm C. et al, "The DTM Gigabit Network", Journal of High Speed Networks, vol. 3, 1999, pp.109-126

D5: US, 5,936,942, A

The documents cited in the International Search Report represent the prior art. The claimed invention stated in claims 1-13 is not considered to be anticipated by these documents. None of the documents or any relevant combination of them reveal a method and device for transferring information in a communication network as described by these claims.

According to the arguments stated above, the invention claimed in claims 1-13 is novel, considered to involve an inventive step and have industrial applicability.



INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(51) International Patent Classification ⁷ : H04L 12/52, H04Q 11/04	A2	(11) International Publication Number: WO 00/60815 (43) International Publication Date: 12 October 2000 (12.10.00)																																	
<div style="display: flex; justify-content: space-between;"> <div style="width: 48%;"> (21) International Application Number: PCT/SE00/00574 (22) International Filing Date: 23 March 2000 (23.03.00) (30) Priority Data: 9901081-1 23 March 1999 (23.03.99) SE (71) Applicant (for all designated States except US): NET INSIGHT AB [SE/SE]; P.O. Box 42093, S-126 14 Stockholm (SE). (72) Inventors; and (75) Inventors/Applicants (for US only): BOSTRÖM, Anders [SE/SE]; Mäster Simonsväg 14, S-170 66 Solna (SE). BOHM, Christer [SE/SE]; Skurusundsvägen 40, S-131 46 Nacka (SE). (74) Agent: AWAPATENT AB; P.O. Box 45086, S-104 30 Stockholm (SE). </div> <div style="width: 48%;"> (81) Designated States: AE, AG, AL, AM, AT, AT (Utility model), AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CR, CU, CZ, CZ (Utility model), DE, DE (Utility model), DK, DK (Utility model), DM, DZ, EE, EE (Utility model), ES, FI, FI (Utility model), GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KR (Utility model), KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SK (Utility model), SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, ARIPO patent (GH, GM, KE, LS, MW, SD, SL, SZ, TZ, UG, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG). Published <i>In English translation (filed in Swedish). Without international search report and to be republished upon receipt of that report.</i> </div> </div>																																			
(54) Title: TRANSFER OF INFORMATION IN A COMMUNICATION NET (57) Abstract <p>The present invention relates to a method and a device for transferring information in a communication network, in which control information for controlling the operation and payload of the network is conveyed separately in respective channels which are each defined by one or more time slots allocated in a recurrent frame and each comprising an established number of n bits. According to the invention, each of at least the time slots which define channels conveying payload traffic is associated with a respective additional bit which is used as a flag to indicate whether control information exists as regards the time slot associated with the respective additional bit. The control information in itself, when said additional bit indicates the existence thereof, is conveyed as at least some of the n bits of the time slot associated with said respective additional bit.</p>																																			
<table border="1" style="border-collapse: collapse; margin-left: auto;"> <tr> <td style="width: 5%;"></td> <td style="width: 85%;"></td> <td style="width: 10%;"></td> </tr> <tr> <td>111</td> <td>X1</td> <td>0</td> </tr> <tr> <td>112</td> <td>X2</td> <td>0</td> </tr> <tr> <td>113</td> <td>X3</td> <td>0</td> </tr> <tr> <td>114</td> <td>M0</td> <td>1</td> </tr> <tr> <td>115</td> <td>X4</td> <td>0</td> </tr> <tr> <td>116</td> <td>M1</td> <td>1</td> </tr> <tr> <td>117</td> <td>X5</td> <td>0</td> </tr> <tr> <td>118</td> <td>X6</td> <td>0</td> </tr> <tr> <td>119</td> <td>M2</td> <td>1</td> </tr> <tr> <td></td> <td></td> <td></td> </tr> </table> <div style="display: flex; justify-content: space-around; margin-top: 10px;"> 110A 110B </div>						111	X1	0	112	X2	0	113	X3	0	114	M0	1	115	X4	0	116	M1	1	117	X5	0	118	X6	0	119	M2	1			
111	X1	0																																	
112	X2	0																																	
113	X3	0																																	
114	M0	1																																	
115	X4	0																																	
116	M1	1																																	
117	X5	0																																	
118	X6	0																																	
119	M2	1																																	

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Codes used to identify States party to the PCT on the front pages of pamphlets publishing international applications under the PCT.

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EE	Estonia	LR	Liberia	SG	Singapore		



World Intellectual Property Organization
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PCT

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WO 00/60815 A3

(51) International Patent Classification⁷: **H04L 12/52,**
H04Q 11/04

BOHM, Christer [SE/SE]; Skurusundsvägen 40, S-131 46
Nacka (SE).

(21) International Application Number: **PCT/SE00/00574**

(74) Agent: **AWAPATENT AB**; P.O. Box 45086, S-104 30
Stockholm (SE).

(22) International Filing Date: **23 March 2000 (23.03.2000)**

(25) Filing Language: **Swedish**

(26) Publication Language: **English**

(30) Priority Data:
9901081-1 **23 March 1999 (23.03.1999)** **SE**

(71) Applicant (for all designated States except US): **NET IN-**
SIGHT AB [SE/SE]; P.O. Box 42093, S-126 14 Stockholm
(SE).

(72) Inventors; and

(75) Inventors/Applicants (for US only): **BOSTRÖM, An-**
ders [SE/SE]; Mäster Simonsväg 14, S-170 66 Solna (SE).

(81) Designated States (national): AE, AG, AL, AM, AT, AT
(utility model), AU, AZ, BA, BB, BG, BR, BY, CA, CH,
CN, CR, CU, CZ, CZ (utility model), DE, DE (utility
model), DK, DK (utility model), DM, DZ, EE, EE (utility
model), ES, FI, FI (utility model), GB, GD, GE, GH, GM,
HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KR (utility
model), KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG,
MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE,
SG, SI, SK, SK (utility model), SL, TJ, TM, TR, TT, TZ,
UA, UG, US, UZ, VN, YU, ZA, ZW.

(84) Designated States (regional): ARIPO patent (GH, GM,
KE, LS, MW, SD, SL, SZ, TZ, UG, ZW), Eurasian patent
(AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent
(AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU,

[Continued on next page]

(54) Title: **INFORMATION TRANSFER IN TIME-MULTIPLEXED COMMUNICATION NETWORK WHERE AN ADDI-**
TIONAL BIT IS USED AS A FLAG FOR INDICATING THE EXISTENCE OF CONTROL INFORMATION REGARDING A
TIME SLOT ASSOCIATED WITH THE ADDITIONAL BIT

111	X1	0
112	X2	0
113	X3	0
114	M0	1
115	X4	0
116	M1	1
117	X5	0
118	X6	0
119	M2	1

110A 110B

(57) Abstract: The present invention relates to a method and a device for transferring information in a communication network, in which control information for controlling the operation and payload of the network is conveyed separately in respective channels which are each defined by one or more time slots allocated in a recurrent frame and each comprising an established number of n bits. According to the invention, each of at least the time slots which define channels conveying payload traffic is associated with a respective additional bit which is used as a flag to indicate whether control information exists as regards the time slot associated with the respective additional bit. The control information in itself, when said additional bit indicates the existence thereof, is conveyed as at least some of the n bits of the time slot associated with said respective additional bit.

WO 00/60815 A3



MC, NL, PT, SE), OAPI patent (BF, BJ, CF, CG, CI, CM,
GA, GN, GW, ML, MR, NE, SN, TD, TG).

(88) Date of publication of the international search report:
18 January 2001

Published:

— With international search report.

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

INTERNATIONAL SEARCH REPORT

International application No.

PCT/SE 00/00574

A. CLASSIFICATION OF SUBJECT MATTER

IPC7: H04L 12/52, H04Q 11/04

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

IPC7: H04J, H04L, H04Q

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

SE,DK,FI,NO classes as above

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	US 5027349 A (HAL A. THORNE), 25 June 1991 (25.06.91), column 2, line 20 - column 3, line 29; column 5, line 6 - column 6, line 6 --	1-12
A	WO 9720405 A1 (DSC COMMUNICATIONS A/S), 5 June 1997 (05.06.97), page 1, line 33 - page 3, line 4; page 5, line 16 - line 26, claims 1-2 --	1-12
P,A	Bell Labs Technical Journal, Volume, January 1999, Bharat T. Doshi et al, "A Simple Data Link Protocol for High-Speed Packet Networks", abstract, see page 85 left column - page 86 left column --	1-12

☒ Further documents are listed in the continuation of Box C.☒ See patent family annex.

* Special categories of cited documents:

"A" document defining the general state of the art which is not considered to be of particular relevance

"E" earlier document but published on or after the international filing date

"L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)

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"P" document published prior to the international filing date but later than the priority date claimed

"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention

"X" document of particular relevance: the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone

"Y" document of particular relevance: the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art

"&" document member of the same patent family

Date of the actual completion of the international search

5 October 2000

Date of mailing of the international search report

10-10-1999

Name and mailing address of the ISA/
Swedish Patent Office
Box 5055, S-102 42 STOCKHOLM
Facsimile No. +46 8 666 02 86

Authorized officer

Rickard Elg / MRO
Telephone No. +46 8 782 25 00

INTERNATIONAL SEARCH REPORT

International application No.

PCT/SE 00/00574**C (Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT**

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	Journal of High Speed Networks, Volume 3, 1999, (Kista, Sweden), Christer Bohm et al, "The Gigabit Network" page 109 - page 126 --	1-12
P,A	US 5936942 A (KEVIN JOHN MCNELEY ET AL), 10 August 1999 (10.08.99), the whole document -- -----	1-12

INTERNATIONAL SEARCH REPORT
Information on patent family members

01/08/00

International application No.

PCT/SE 00/00574

Patent document cited in search report			Publication date	Patent family member(s)		Publication date
US	5027349	A	25/06/91	AT	126641 T	15/09/95
				AT	130989 T	15/12/95
				AU	626198 B	23/07/92
				AU	5468290 A	15/11/90
				CA	2016344 A,C	10/11/90
				DE	69021626 D,T	21/03/96
				DE	69023805 D,T	01/08/96
				EP	0397138 A,B	14/11/90
				SE	0397138 T3	
				EP	0397139 A,B	14/11/90
				SE	0397139 T3	
				ES	2078920 T	01/01/96
				ES	2082799 T	01/04/96
WO	9720405	A1	05/06/97	AU	7621296 A	19/06/97
				DK	133395 A	25/05/97
				EP	0862822 A	09/09/98
				US	5930263 A	27/07/99
US	5936942	A	10/08/99	NONE		